
NPP
CLEAN ENERGY, SAFE POWER
LITHIUM-ION BATTERIES

Company Introduction

NPP Power focuses on R&D, manufacturing and sales of traditional and new energy products, including valve-regulated lead-acid batteries and lithium batteries.

At present, the company has five A to Z manufacturing plants, four in China (Dongguan, Guangzhou, Henan and Hunan) and one in Ho Chi Minh City, Vietnam. NPP Power has sales offices all over mainland China and overseas sales subsidiaries in North America, Europe, and Africa. It has built a truly global manufacturing, distribution, marketing and after-sales service network.

NPP Power products are manufactured based on strong technical expertise, coupled with advanced manufacturing equipment. With professional Management and R&D Team, the company acquired ISO9001 quality management system, ISO14001 environment management system, and ISO45001 health and safety management system certifications. Furthermore, Chenzhou NPP Power Co., Ltd. was certified as a high-tech enterprise in China.

We pay great attention to the quality of our products. Strict quality control from the raw materials to the finished products ensures every battery reaches the highest quality standard. NPP Power products own a variety of international certificates and comply with all applicable standards.

NPP Power Dongguan factory, China
lithium battery

NPP Power Vietnam factory
VRLA

Milestones

- **2002** 1st factory founded in Guangzhou, with a total area of 40,000m²
- **2003** Shanghai & Guangzhou offices established
- **2005** Beijing, Shenzhen & Chengdu offices established
- **2010** Shenyang & Xi'an offices established
- **2011** 2nd factory founded in Jiaozuo, a total area of 70,000m²
- **2012** Total 16 sales offices located in China
- **2013** 3rd factory founded in Chenzhou, a total area of 200,000m²
- **2014** North American office & warehouse established in Los Angeles, USA
- **2016** 4th factory founded in Dongguan, manufacturing lithium battery pack
- **2017** European office & warehouse established in Rotterdam, The Netherlands
- **2018** 5th factory founded in Ho Chi Minh City, Vietnam, a total area of 72,280m²
- **2018** African office & warehouse established in Lagos, Nigeria
- **2019** Second phase of Vietnam factory expansion
- **2021** Lithium cells production line are built
- **2023** India & SAARC office established in Kolkata, India

NPP Power Henan factory, China
VRLA

NPP Power Guangzhou factory, China
VRLA


NPP Power Hunan factory, China

NPP Power Hunan factory, China
lithium cell & VRLA

Our Culture

For the customer • By the customer • Of the customer

Customer Service

100% Customer Satisfaction Service
HEE Principle - Your Hands • Your Eyes • Your Ears
Six Sigma • 6S

NPP
CLEAN ENERGY, SAFE POWER

LFC Series

$LiFePO_4$ Technology – Lithium Cells

Voltage	Capacity	Application	Discharge current	Cycle life
3.2V	100	ESS	100A	>4000（100%DOD）
3.2V	280	ESS	280A	>6000（100%DOD）

Ultra-Safe
Explosion-proof no leakage
Fast heating dissipation
Stable structure

Stable
Low IR/High CR/
Discharge steadily

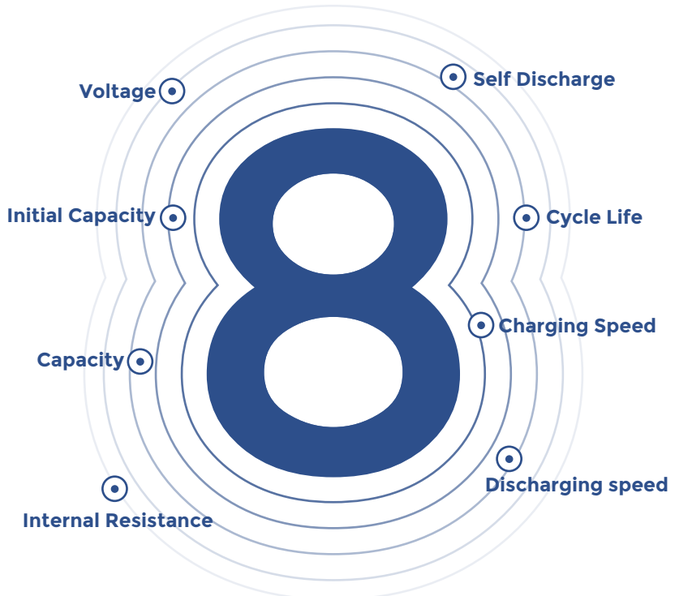
Long life
Low self-discharge
Self-repair
Reduce battery internal resistance

Customized
Design accord to customer needs
OEM

Advantages

- Cells Quiescence : Cells stand for 30 days to remove zero voltage and micro-short-circuit cells (over 4 times longer)
- Eight Consistency : Voltage, capacity, internal resistance, discharge voltage plateau,self-discharge, initial capacity, cycle life
- Active Equalizer : Equalize the voltage difference and current distribution of the cells in any conditions
- New NPP cells with more than 4000 cycles

Note: NPP PACK process can improve battery performance by 15% at same materials and same conditions.



Battery Pack

- Support high voltage DC power supply solutions below 1000V

Strict configuration and assembly scheme

- 8 aspects for consistency grading is four times of the traditional standard, standing still for four times longer makes the consistency twice higher than others

LFB Series- Portable Power Station

Applications

- Charging power for lamps, tools, coolers, lighting laptops, smartphones, etc
- Camping power supply
- Recreational Vehicle (RV) power supply
- Travel power supply

AC output

- 110V/220V

Models Available

- Capacity range:600W 1200W 1500W 2200W

Multiple charging methods

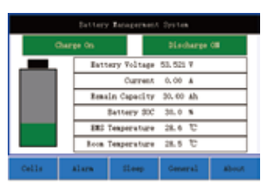
- power grid with an adaptor
- car
- Type-C (input and output)
- solar panel

DC output

- Car outlet
- DC5.5x2.5
- USB QC3
- USB Type-C

LFP Series

$LiFePO_4$ Technology in VRLA Container



Applications

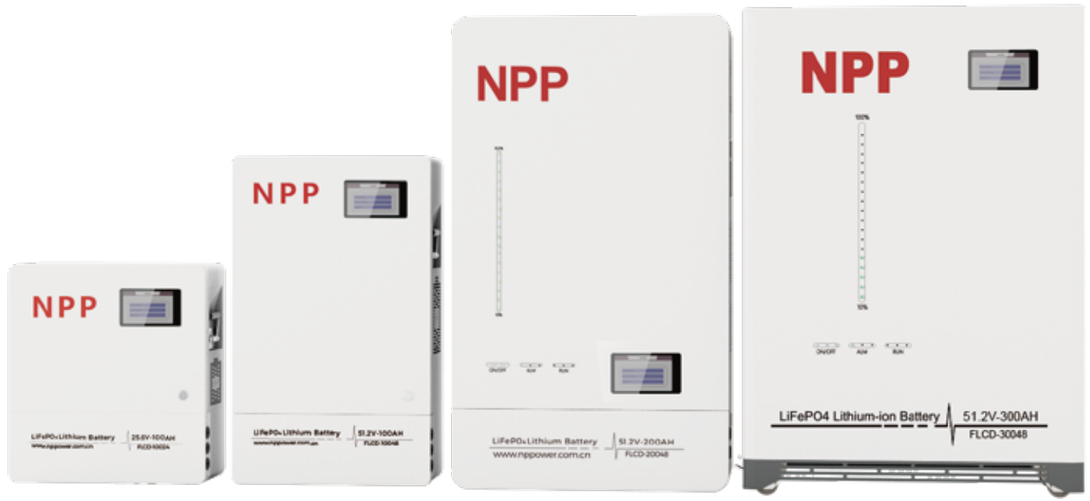
- Solar & Wind Energy Storage
- UPS
- Data Centers
- Telecommunication
- Electric Power Systems
- Electric Vehicles
- Emergency Light
- All-purpose

Hot-sale Models

- 12V 12Ah M7 case 151x65x97mm
- 12V 100Ah M100 case 330x171x215mm
- 12V 150Ah M100 case 406x174x207mm
- 12V 200Ah M100 case 483x170x240mm

Features

- Capacity range: 5Ah ~ 400Ah
- Voltage class: 12.8V
- Long design life: 20 years (depending on cycles)
- Long cycle life
- Light weight: 70% lighter than VRLA
- Fast charging: 0.5CA, nearly 2 hours fast charging
- Smart BMS
- Self-discharge per month: ≤ 1% at 25 ℃(28 days)
- Operation temperature range: -10℃ to + 55 ℃
- Recommended operation temperature: 25 ℃
- Touch screen available: for showing parameter and settings
- Bluetooth, RS485 communication options



Applications

- Base Stations Telecommunications
- Solar & Wind Energy Storage
- UPS
- Data Centers
- Electric Power Systems
- All-purpose

Hot-sale Models

- 25.6V/100Ah
- 25.6V/200Ah
- 51.2V100Ah
- 51.2V200Ah
- 51.2V300Ah

Features

- Capacity range: 100Ah ~ 300Ah
- Voltage class: 25.6V, 51.2V
- Nice outlook
- Monitor screen
- Small size
- Easy Installation
- Wall-mounted/landed available
- Touch screen available: for showing parameter and settings
- RS485
- Support full power operation (operation at 100% load)
- Continuous discharge at 1C

LFR Series

LiFePO₄ Technology for Telecom – Base Station

Applications

- Base Stations
- Telecommunications
- Solar & Wind Energy Storage
- UPS
- Data Centers
- Electric Power systems
- All-purpose

Battery Model	Rated Voltage	Rated Capacity	Discharge Current	Peak Discharge Current	Cut off Discharge Voltage	Charge Voltage	Charge Current	Weight	Dimenison LxWxH [mm]	Height*
LFR51.2-50	51,2V	50Ah	100A	150A	44,8V	58,4V	10A	28,7 kg	442x480x178	3U/2U
LFR51.2-100	51,2V	100Ah	100A	300A	44,8V	58,4V	20A	46 kg	442x480x222	3U/2U
LFR51.2-150	51,2V	150Ah	100A	300A	44,8V	58,4V	30A	73,5 kg	442x480x311	5U/3U
LFR51.2-200	51,2V	200Ah	100A	300A	44,8V	58,4V	40A	85 kg	442x480x311	5U/3U
LFR51.2-280	51,2V	280Ah	100A	300A	44,8V	58,4V	50A	115 kg	442x650x311	7U
LFR51.2-300	51,2V	300Ah	100A	300A	44,8V	58,4V	60A	125,5 kg	442x650x311	7U

*Rack Unit: 1U = 44.45 mm (EC 60297-3-108:2014)

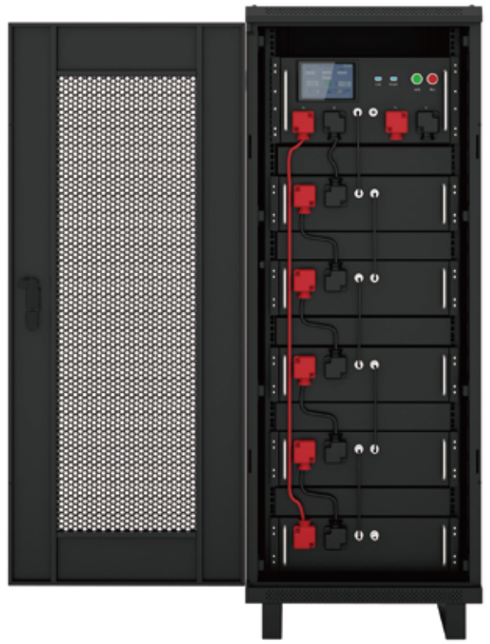
Hot-sale Models

- 51.2V 100Ah
- 51.2V 200Ah
- 51.2V 300Ah

Models Available

- Capacity range: 50Ah ~ 300Ah
- Voltage class: 25.6V, 51.2V

Cabinet Power



Applications

- High-power UPS
- Inverter devices
- Solar & Wind Energy Storage
- Telecommunications
- Rail and Transportation Data Centers
- Electric Power systems

Industrial and commercial energy storage

- Capacity range: 50Ah ~ 800Ah
- Voltage class: 96V,192V, 240V, 384V
- Below 1000V

Hot-sale Models

- 96V 50Ah
- 96V 100Ah/200Ah/300Ah
- 192V 100Ah/200Ah/300Ah
- 384V 100Ah/200Ah/300Ah
- 768V 100Ah/200Ah/300Ah

Features

- Safety
- Reliability
- Long life
- Standardized designs
- Modular connection
- Charging and discharging dual control
- RS485/CAN port
- Visualization, touch screen
- Flexible expansion, parallel connection available
- Remote maintenance feature
- support long distance monitoring, 4G mobile app monitoring

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CLEAN ENERGY, SAFE POWER

Smart String Energy Storage System

Applications

- Base Stations Telecommunications
- Solar & Wind Energy Storage
- UPS
- Data Centers
- Electric Power Systems
- All-purpose

Electrical Parameters (25°C)						
Rated Voltage	51.2V	51.2V	51.2V	51.2V	51.2V	51.2V
Rated Capacity (C_5)	100Ah@25°C	200Ah@25°C	300Ah@25°C	400Ah@25°C	500Ah@25°C	600Ah@25°C
Energy	5120Wh	10240Wh	15360Wh	20480Wh	25600Wh	30720Wh
Months Self Discharge	<3%	<3%	<3%	<3%	<3%	<3%
Charge Efficiency	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C
Discharge Efficiency	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C
Terminal Diameter	M8	M8	M8	M8	M8	M8
Internal resistance (Fully charged, 25°C)	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ
Cycle life	4000 cycles @ 0.2C 100%D.O.D					
Capacity affected by temperature						
40°C	101%					
25°C	100%					
0°C	90%					
-10°C	75%					
Operating temperature range						
Nominal operating temperature	25°C± 3°C (77°F± 5°F)					
Discharge	- 20°C~ 60°C (-4°F ~ 140°F)					
Charge	0°C~ 45°C (32°F ~ 113°F)					
Storage	0°C~ 40°C (32°F ~ 104°F)					
Water Dust Resistance	IP50					
Charge Voltage	56.8V					
Standard Charge Mode (25°C±2°C, <75%RH)	0.2C A Constant Current to 57V, then Constant Voltage 57V , until the current drops to 0.02CA, before use, rest 30 minutes					
Charge Current	50A	100A	150A	200A	250A	300A
Charge Cut off Voltage	Nominal operating temperature					
Continuous Discharge Current	100A	160A	240A	320A	400A	480A
Maximum Pulse Current	150A (<1S)	320A (<1S)	480A (<1S)	640A (<1S)	800 (<1S)	960A (<1S)
Discharge Cut Off Voltage	44.8V					
Communicate Protocol (optional)	RS485//CAN					
SOC (optional)	Screen/LED/PC Software					
Application connection	1 string 1 parallel					
Mechanical Cells	16 Strings					
Approx. Weigh of Battery	52Kg					
Dimension(LxWxH)	640x400x160mm					
Dimension(LxWxH)	640x400x314mm(Including bottom bracket)					

High voltage storage system

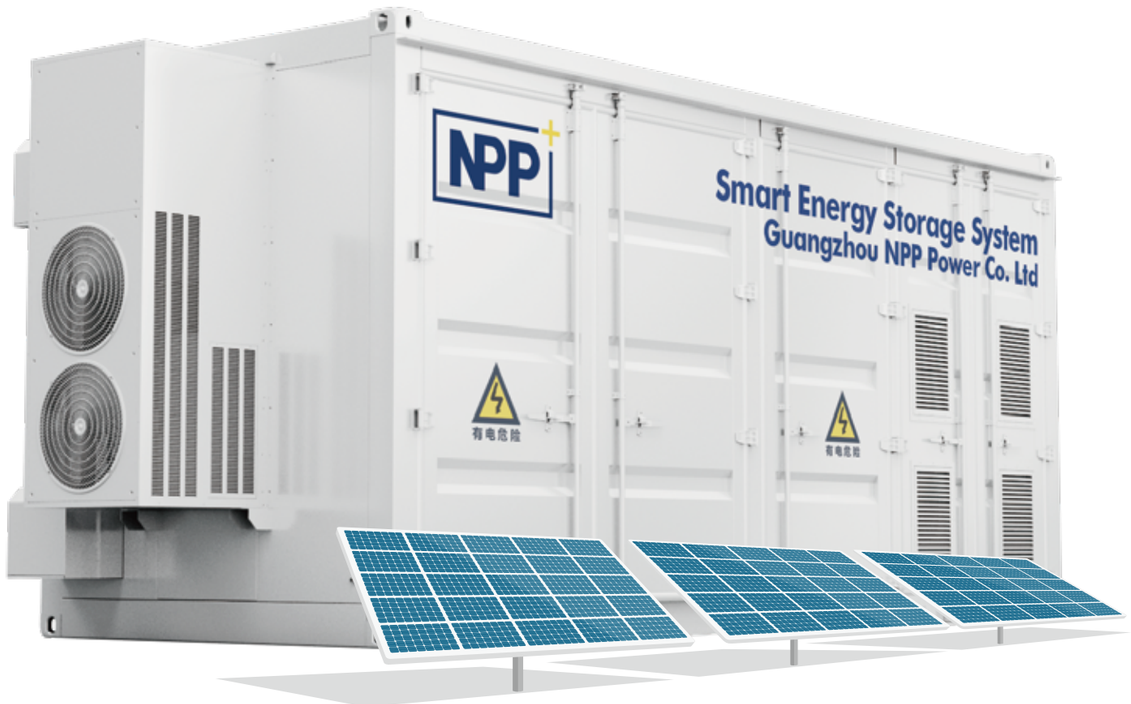
Features

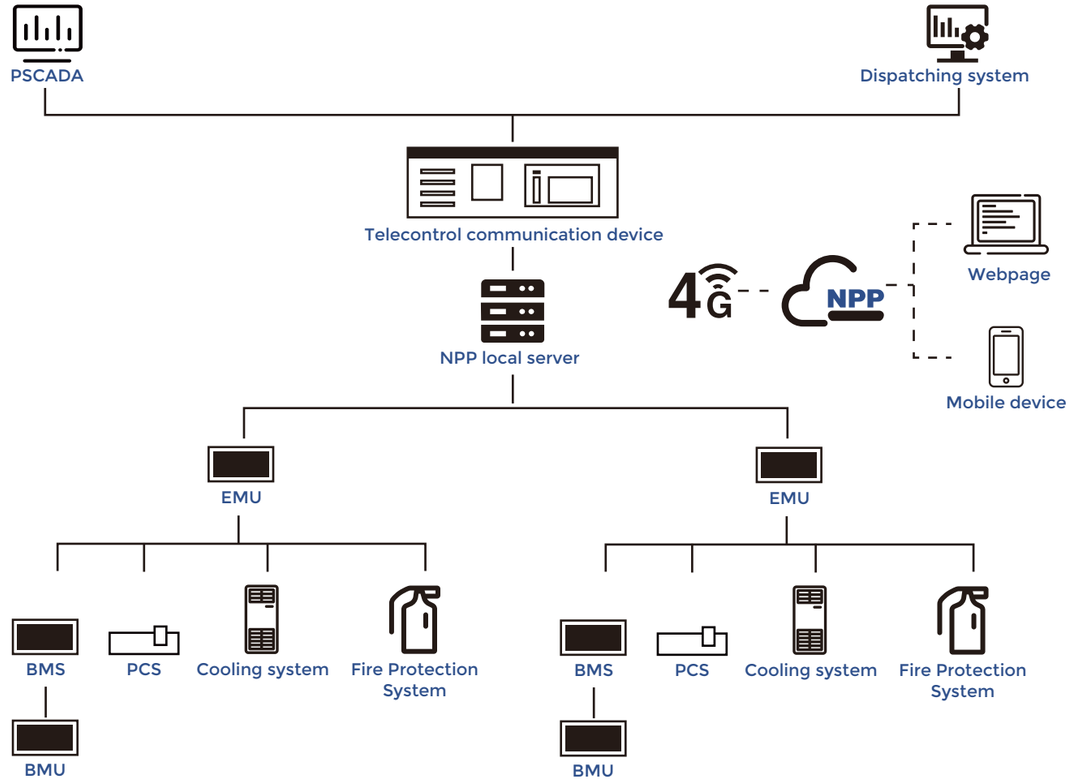
- 16 modules in parallel
- Each module can be independently managed and operated to ensure the safety of the system
- Pulley bottom, manual switch, and visual supervision interface
- 4 times long static and 8 consistency screening make the battery more durable
- Nano-coating and self-healing technology construct the LPF channel to add a firewall to the battery

Electrical Parameters (25°C)						
Rated Voltage	51.2V	102.4V	153.6V	204.8V	256V	307.2V
Rated Capacity (C_5)	100Ah@25°C	100Ah@25°C	100Ah@25°C	100Ah@25°C	100Ah@25°C	100Ah@25°C
Energy	5120Wh	10240Wh	15360Wh	20480Wh	25600Wh	30720Wh
Months Self Discharge	<3%	<3%	<3%	<3%	<3%	<3%
Charge Efficiency	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C	99.5%@ 0.2C
Discharge Efficiency	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C	96-99%@ 1C
Terminal Diameter	M8	M8	M8	M8	M8	M8
Internal resistance (Fully charged, 25°C)	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ
Cycle life	4000 cycles @ 0.2C 100%D.O.D					
Capacity affected by temperature						
40°C	101%					
25°C	100%					
0°C	90%					
-10°C	75%					
Operating temperature range						
Nominal operating temperature	25°C± 3°C (77°F± 5°F)					
Discharge	- 20°C~ 60°C (-4°F ~ 140°F)					
Charge	0°C~ 45°C (32°F ~ 113°F)					
Storage	0°C~ 40°C (32°F ~ 104°F)					
Water Dust Resistance	IP50					
Charge Voltage	56.8V					
Standard Charge Mode (25°C±2°C, <75%RH)	0.2C A Constant Current to 57V, then Constant Voltage 57V , until the current drops to 0.02CA, before use, rest 30 minutes					
Charge Current	20A	20A	20A	20A	20A	20A
Maximum Charge Current	50A	50A	50A	50A	50A	50A
Charge Cut off Voltage	Nominal operating temperature					
Continuous Discharge Current	100A	100A	100A	100A	100A	100A
Maximum Pulse Current	200A (<1S)	200A (<1S)	200A (<1S)	200A (<1S)	200A (<1S)	200A (<1S)
Discharge Cut Off Voltage	44.8V					
Communicate Protocol (optional)	RS485/CAN					
SOC (optional)	Screen/LED/PC Software					
Application connection	1 string 1 parallel					
Mechanical Cells	16 Strings					
Approx. Weigh of Battery	52Kg					
Approx. Weigh of Controller	20Kg					
Dimension(LxWxH)	640x400x160mm					
Dimension(LxWxH)	640x400x314mm(Including bottom bracket)					

ESS Series

$LiFePO_4$ Technology – Energy Storage Power Station





Models Available

- Capacity range: Customized
- Battery box:51.2V 280Ah/306AH
- Battery cluster:768V 280Ah/300AH

Hot-sale Models

- 1MWh/500KW
- 2MWh/1MW
- 1MWh above available

System main parameters(1.07MWh/500kW)

- Battery chemistry: LiFePO4
- Cell voltage: 3.2V
- Cell capacity: ≥280Ah
- Battery unit voltage: 51.2V 16S
- Battery unit capacity: ≥100Ah
- Battery unit quantity: 15
- Battery cluster: 5P(768Vx280Ahx5)
- Battery group: 2S
- Battery group voltage: 384Vdc x2
- Battery system voltage: 768Vdc
- Battery continue discharge current: 700Ah(2HR)
- Battery max output power: 500KW
- Battery work temperature: -10 to +55°C
- BMS communicate port: RS232, RS485,CAN
- Battery cabinet size: 20ft

Outdoor Integrated Energy Storage Cabinet

$LiFePO_4$ Technology – OEM Pack

System Type	Power Cabinet-60	Power Cabinet-115	Power Cabinet-215
System main parameters			
Normal Capacity（kWh）	60	115	215
Rated Power (kW)	30	62.5	100
Local Monitoring	Yes	Yes	Yes
Working Temperature Range (℃)	-20~60	-20~60	-20~60
Fire Protection	Aerosol/perfluorohexadone	Aerosol/perfluorohexadone	Aerosol/perfluorohexadone
Cooling system	Air Conditioner	Air Conditioner	Air Conditioner
Communication Protocol	RS485、4G、CAN	RS485、4G、CAN	RS485、4G、CAN
Protection Class	IP54	IP54	IP54
Humidity	0-95%, Non-condensing	0-95%, Non-condensing	0-95%, Non-condensing
Isolation transformer）	Optional	Optional	Optional
Altitude（m）	3000	3000	3000
PCS Data		DC Parameters	
Voltage Range（Vdc）	200~900	615~900	650~900
		AC Parameters	
Max. Operation Current（A）	50	88	150
Rated Power（kW）	30	60	100
Rated Discharge Voltage（Vac）	400	400	400
Wiring	Three Phase+N+PE	Three Phase+N+PE	Three Phase+N+PE
Max. Discharge Current（A）	43	86	145
Rated Power（Hz）	50	50	50
Battery Data			
Model	51.2V 100Ah	51.2V 150Ah	51.2V 280Ah
Weight（kg）	44.00	66.00	106.00

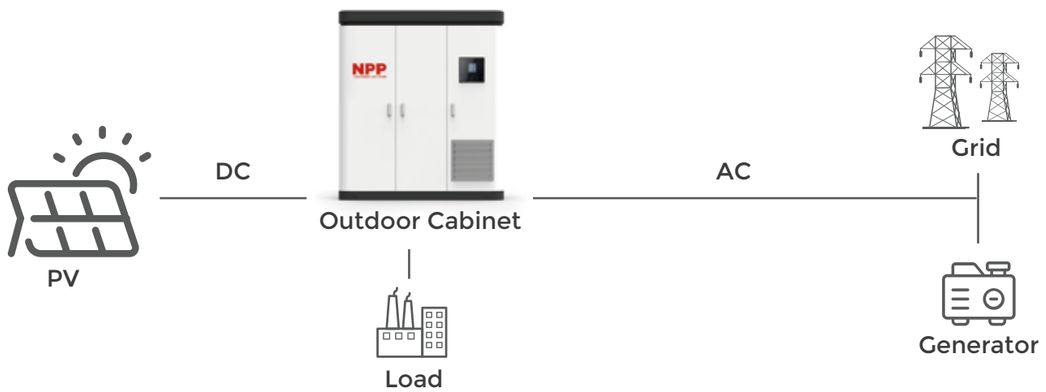
*The ESS series range includes but is not limited to the above models! Please contact us for more information.

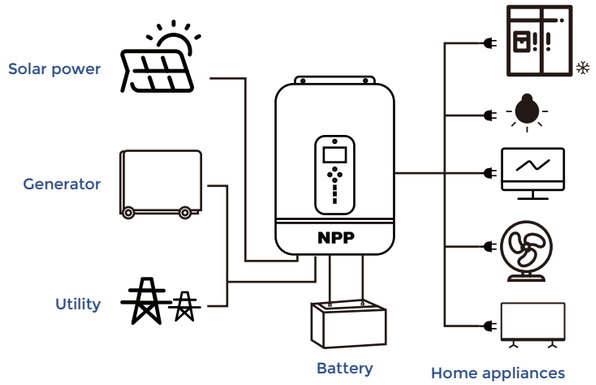
Applications

- **Backup power**
  Supply power to the load when the power grid is out of power, or use as backup power in off-grid areas.
- **Enhance power system stability**
  Smooth out the intermittent output of renewable energy by storing electricity and dispatching it when needed.
- **Optimizing the use of renewable energy**
  Smooth out the intermittent output of renewable energy by storing electricity and dispatching it when needed.
- **Peak shaving & Valley filling**
  Supply power to the load when the power grid is out of power, or use as backup power in off-grid areas.

Features

- Active balancing,extended service life and reduced maintenance
- String PCS is adopted to improve the battery life cycle and support off-grid/grid-connected/off-grid hybrid modes, etc.
- Instant switching and black starting
- Customization possibility





5KW OFF GRID SYSTEM

- It's based on inverter 3KW and photovoltaic 5KW.
- Calculated with an inverter coefficient of 0.8, the total load power is ≤4000W.
- And the quantity of solar modules and batteries can be expanded or reduced according to the actual power consumption of the load.

Item	Models	Qty.	Power	Remark
Solar Panel	450W/36V	4 pcs	1800W	450W
Lithium ion Battery	100AH/51.2V	1 pcs	5120WH	1S
Inverter	5K	1 pcs	5000W	
Accessories	Cables, Brackets, Cabinets	As needed		
Average daily power generation: 6.6KWH, reference average sunshine peak 3.7H				
Battery storage capacity: 5.12 KWH				
The photovoltaic utilization rate is 90%				

APPLICATION REFERENCE

Application	Unit Power (W)	Qty.	Total Power (W)	Electricity Consumption at Daytime		Electricity Consumption at Night	
				Time(H)	KWH	Time(H)	KWH
Lighting	30	5	150	0	0	5	0.75
LCD TV	100	1	100	3	0.3	0	0
Fans	100	3	300	2	0.6	2	0.6
Electric Cooker	800	1	800	1	0.8	0	0
Electric Kettle	1000	1	1000	0.5	0.5	0	0
Washer	300	1	300	1	0.3	0	0
Refrigerator	100	1	100	12	/	12	0.8
Others	50	1	50	2	0.1	2	0.1
			2800		2.6		2.1
Total Electricity Consumption (KWH)							4.75
Power loss Calculated by 1.2							5.7
High-power electrical appliances operate at staggered peaks; the load utilization rate is 50% , 50Ah <0.5C discharge,support 100Ah ＜1C discharge							

10KW OFF GRID SYSTEM

- It's based on inverter 10KW and photovoltaic 10KW.
- Calculated with an inverter coefficient of 0.9, the total load power is ≤9000W.
- And the quantity of solar modules and batteries can be expanded or reduced according to the actual power consumption of the load.

Item	Models	Qty.	Power	Remark
Solar Panel	550W/36V	8 pcs	4400W	
Lithium ion Battery	200AH/51.2V	1 pcs	10240WH	1S
Inverter	5K	1 pcs	10000W	
Accessories	Cables, Brackets, Cabinets	As needed		
Average daily power generation: 10.36KWH reference average sunshine peak 3.7H				
Battery storage capacity: 10.24KWH				
The photovoltaic utilization rate is 90%				

APPLICATION REFERENCE

Application	Unit Power (W)	Qty.	Total Power (W)	Electricity Consumption at Daytime		Electricity Consumption at Night	
				Time(H)	KWH	Time(H)	KWH
Lighting	30	5	150	0	0	5	0.75
LCD TV	100	1	100	3	0.3	5	0.5
Fans	100	3	300	4	1.2	6	1.8
Electric Cooker	800	1	800	1	0.8	1	0.8
Electric Kettle	1000	1	1000	1	1	1	1
Washer	300	1	300	1	0.3	0	0
Refrigerator	100	1	100	12	/	12	0.8
Others	50	1	50	2	0.1	2	0.1
			2800		3.7		5.75
Total Electricity Consumption (KWH)							9.45
Power loss Calculated by 1.2							11.3
High-power electrical appliances operate at staggered peaks; the load utilization rate is 50% , 50Ah <0.5C discharge,support 100Ah ＜1C discharge							

Rotterdam, The Netherlands

Lagos, Nigeria

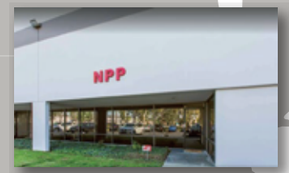
Henan

Hunan

Guangzhou

Vietnam

Dongguan, China



Los Angeles, USA

NPP Factory

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NPP
CLEAN ENERGY, SAFE POWER

For the customer • By the customer • Of the customer

Excellent Project Cases

$LiFePO_4$ Technology